

### ABSTRACT OF THE DISCLOSURE

A system and method for producing foundry quality sand from non-conventional starting materials through the combination of oolitization and classification. Incoming particulate matter is first directed into a controlled energy attrition unit where the particles are made to collide with one another. Such collisions clean and round the particles by chipping away surface projections and coatings without crushing the particles. The particle stream is then directed through a multi-fraction classifier where it is separated into two or more useable grades of foundry sand. An air classifier is preferred for the classification stage.